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Bibliography of Canadian Contributions to Antarctic and Bipolar Science

Bibliographie des contributions canadiennes à la science antarctique et bipolaire

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BIBLIOGRAPHY OF CANADIAN CONTRIBUTIONS TO ANTARCTIC AND BIPOLAR SCIENCE

BIBLIOGRAPHIE DES CONTRIBUTIONS CANADIENNES À LA SCIENCE ANTARCTIQUE ET BIPOLAIRE

Prepared for the Canadian Polar Commission by
Établie pour la Commission canadienne des affairs polaires par
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Ottawa, Ont.
July 1997

INTRODUCTION

The purpose of this bibliography is to provide an overview of Canadian contributions to Antarctic and bipolar science as part of Canada's application to become a Full Member of the Scientific Committee for Antarctic Research (SCAR). As an indication of what Canadians may contribute in the future, the document focuses on the recent contributions of Canadian research scientists. The document does not cover any specific time period, but few items date from before 1970. The bibliography is a companion to the report, *Canadians in Antarctic and Bipolar Science*, which describes briefly the scope and nature of Canadian scientific activities.

Information has been collected from existing reports, and from scientists who are, or who have been, working in the field. Requests for information were also made through the *Newsletter of the Canadian Antarctic Research Network*. This first version of the bibliography will be updated from time to time to include new publications and any existing ones which may have been omitted.

The material is presented according to the relevant SCAR subsidiary group (i.e., Permanent Working Groups and Groups of Specialists). Two additional sections cover "Legal/Political Aspects" and "Others". More than one subsidiary group may discuss the same scientific issue, (e.g., UV-effects and Vostok Lake Drilling) but each entry in the bibliography is listed only once. This occasionally led to difficult choices. All publications dealing with paleoclimates based on proxy data are listed under "Global Change and the Antarctic (GLOCHANT)", as are papers dealing with physical oceanography, including sea ice. "Hydrology/Limnology" has been entered as a sub-section under "Biology".

Scientists frequently move their place of work from one country to another, and the question of how to define a Canadian contribution comes up. The increasing number of international scientific teams, and multiple authorship of scientific publications (often including several countries) makes this question even more complicated. As a general rule, a scientific paper written or co-authored by a Canadian scientist working for a Canadian institution at the time of publication is considered a "Canadian contribution" in the context of this report; it does not matter who initiated, financed, or organized the program. When the scientists involved in a project include a Canadian scientist as co-author, they recognize a Canadian contribution. Several scientists now working in Canada contributed significantly to Antarctic science prior to coming to Canada; however, only those works published in the year they came to Canada or later have been included.

Papers dealing with Antarctic issues were automatically included while publications focusing on Arctic issues were deemed to be bipolar if they contained specific and significant references to application(s) in Antarctica. *Potential* applicability to Antarctica was not sufficient; the author(s) must have demonstrated a clear link to the South Polar region.

The Canadian Antarctic Research Program is anxious to update this bibliography and would appreciate hearing about new publications as well as existing ones that should be included.

Ottawa, September 1997

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INTRODUCTION

Cette bibliographie vise à fournir un aperçu des contributions canadiennes à la science antarctique et bipolaire dans le contexte de la demande d'adhésion du Canada au CSRA (Comité scientifique pour les recherches antarctiques) à titre de membre à part entière. C'est pourquoi les responsables ont fait ressortir les contributions récentes, qui donneront une idée de ce que les Canadiens pourraient accomplir à l'avenir. La bibliographie ne porte pas sur une période précise, mais quelques activités ont été réalisées avant 1970. Elle accompagne le rapport intitulé « Les Canadiens dans l'Antarctique et la science bipolaire ». La bibliographie donne la liste des personnes qui participent ou qui ont participé aux activités scientifiques, et le rapport expose les résultats.

L'information provient des rapports antérieurs ou a été fournie par des scientifiques qui travaillent ou qui ont travaillé sur le terrain. D'autres renseignements proviennent du bulletin de nouvelles du Réseau de recherches antarctiques du Canada. Cette première version de la bibliographie sera mise à jour au besoin, de manière à inclure les nouvelles publications et celles qui n'ont pas été mentionnées dans cette version.

L'information est présentée en fonction des groupes affiliés au CSRA, c'est-à-dire les groupes de travail permanents et les groupes de spécialistes. Deux autres sections portent sur les « Autres » aspects. Il est possible que plusieurs groupes affiliés traitent de la même question scientifique comme, par exemple, les effets des rayons UV et le forage dans le lac Vostok, mais chaque entrée figure une seule fois dans la bibliographie. Il a parfois fallu faire un choix difficile. Toutes les publications traitant des paléoclimats basées sur des données indirectes sont énumérées sous la rubrique Changements à l'échelle du globe et l'Antarctique (CHGLOANT), comme celles qui portent sur l'océanographie physique, y compris la glace marine. Une sous-section intitulée hydrologie/limnologie a été incluse dans la rubrique Biologie.

Comme les scientifiques se déplacent fréquemment d'un pays à un autre pour faire leur travail, les responsables s'interrogent souvent sur la façon de déterminer si une contribution est canadienne. L'augmentation croissante du nombre d'équipes internationales de scientifiques et d'ouvrages scientifiques rédigés par plusieurs auteurs, de différents pays, complique davantage la question. En règle générale, un texte scientifique rédigé ou corédigé par un scientifique canadien qui travaillait pour un organisme canadien au moment où il a été publié, est considéré comme une « contribution canadienne » aux fins du présent rapport. On ne se demande pas qui a réalisé, financé ou organisé l'activité. Lorsqu'un scientifique canadien participe à la rédaction d'un texte, les autres scientifiques qui ont travaillé au projet reconnaissent la contribution canadienne. Plusieurs scientifiques qui travaillent actuellement au Canada ont apporté une importante contribution à la science antarctique avant de venir au Canada. Leurs publications antérieures ne sont pas incluses dans cette bibliographie qui mentionne seulement les textes publiés après leur arrivée.

Les communications concernant des dossiers antarctiques ont été automatiquement incluses, alors que les publications sur les affaires arctiques ont été considérées comme bipolaires si elles faisaient grandement référence à des applications dans l'Antarctique. La *possibilité* d'application dans l'Antarctique n'était pas suffisante. Il fallait que les auteurs aient prouvé la corrélation possible avec la région polaire du sud.

Les responsables du programme canadien de recherche antarctique ont hâte d'actualiser cette bibliographie. Ils aimeraient être informés des nouvelles publications et de celles qui, d'après vous, auraient dû être incluses.

Ottawa, juillet 1997

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